
Needs Assessment of Forensic Laboratory Services in the State of Rhode Island



May 18th, 2001

Executive Summary

The Criminal Justice system in Rhode Island receives forensic services from four sources:

- The State Crime Laboratory at the University of Rhode Island
- The Department of Health Forensic Laboratory
- The Department of Health Medical Examiner's Laboratory
- Various agencies outside the State

This report deals with the efficiency and effectiveness of the services provided from the first two, but the recommendations may impact upon the ME laboratory and on future utilization of the outsourced services.

The two laboratories are staffed with well-trained professional personnel. The compact size of the state provides a basis for good communication between users and providers of the services.

However, using the standards of the national accreditation program provided through the American Society of Crime Laboratory Directors Laboratory Accreditation Program (ASCLD/LAB) to benchmark the service physical and personnel infrastructure shows the following shortcomings that would need to be rectified before the service(s) could be accredited:

- Budget and personnel development
- Quality systems management and proficiency testing
- Testing procedures
- Evidence control
- Physical accommodations
- Safety

Evaluation of service provision and stakeholder needs and comparison with national performance levels shows that effectiveness of service delivery is compromised by:

- Lack of coordination of service provision
- Lack of appropriate authority in direction and accountability of forensic service provision

- Failure to implement new DNA technologies
- Lack of a State plan to deal with provision of non-core services such as Questioned Document examination

The reviewers agree with the many stakeholders who expressed concern that the forensic services were not organized in a way that makes them accountable to an agency within the Justice System.

The quality and effectiveness of service provision need to be addressed by rationalization of current services into a single forensic service that:

- Is located at a new single site of a minimum of 30,000 square feet
- Is accountable to a senior officer in a public safety or criminal justice agency
- Provides core services using its own staff, and manages the provision of non-core services from other agencies
- Is headed by a Director who has a proven record in management in an accredited crime laboratory
- Has a senior staff position responsible for Quality Management and a senior staff position responsible for Training and Research & Development

The one-time cost of implementation of the review findings is between \$285,000 for accreditation and \$8,000,000 for a new laboratory. The lower figure reflects the need to devote approximately 2 FTE to the project for a 2 year period and estimate of the cost of infrastructure changes that will be needed. The higher figure is based on the average cost of \$175 to \$250 per square foot quoted to NFSTC for new laboratory building. Obviously the actual total will depend on the land cost at the actual chosen site, should the State choose to proceed that way. However, less costly alternatives to building may be available to provide an adequate physical facility, such as re-modeling of available government space.

In order to meet and maintain accepted levels of performance, recurrent costs need to be increased by the order of \$100,000. This is based mainly on the estimated salary for a full time Quality Manager, and a minimum training budget of \$1,000 per FTE.

Report Findings

2.1 State Crime Laboratory

The State Crime Laboratory (SCL) is housed in 1600 square feet spread over three locations on the campus of the University of Rhode Island. The SCL provides Criminalistics services and training to the local law enforcement agencies and has won a number of grants for service R&D.

The Findings for the SCL are presented below in the format:

- Area assessed in ***bold italic type***
- Finding in regular type
- Comment on the Finding in *italic type*

2.1.1 Management and Operations

2.1.1.1 Budget

The SCL does not have a budget for equipment.

Up-to-date equipment for use in the laboratory's main areas of testing is vital to an effective and efficient forensic service. The laboratory has depended on grant income for its equipment and does not have an adequately resourced or developed training program. Most of its equipment is old but serviceable. A replacement plan has to be put in place before it becomes old and non-serviceable. Some of the plans for future acquisitions (for example for a Scanning Electron Microscope used to test gunshot residues) could result in significant expenditures in areas where the estimated caseload does not justify the expenditure.

The SCL currently has a \$450,000 federal earmark from the National Institute of Justice. This grant is from the CLIP (Crime Laboratory Improvement Program). Since a proposal for the use of this funding has not been written it is suggested that the SCL seek input from service users and other providers in RI and from other service providers in New England on how best to use the funding to improve services statewide.

However, grant funds are meant to supplement budgets not to replace them.

2.1.1.2 Evidence control

The control of evidence integrity does not meet the requirements for storage under proper seal or those for protection from loss, cross-transfer, contamination and deleterious change. This is especially critical given that the laboratory is located in a university with substantial opportunity for through traffic from non-laboratory personnel.

Control of evidence integrity is one of the most important aspects of management and operations in a forensic laboratory. Unless the integrity of materials submitted for testing is absolutely guaranteed the value of any resulting inceptive or associative evidence is open to question.

2.1.1.3 Quality management

The laboratory does not have a quality manager nor does it have an acceptable quality manual. Without a Quality Manager and appropriate manual, the laboratory cannot conduct the annual audits and reviews required under the ASCLD/LAB program.

Testing of adequate quality does not arise spontaneously. It requires active and aware management of techniques and systems. It is now accepted that a minimum of 5% of a laboratories resources needs to be devoted to quality, that an individual needs to be identified as the manager responsible for quality management, and that the policies and procedures utilized by the laboratory to establish and maintain quality testing and interpretations must be codified in a Quality Manual.

The conducting of an annual audit and review of the quality system is the essential step to ensure that the laboratory's quality system continues to develop and does not become inadequate.

2.1.1.4 Test procedures

The laboratory does not have documented records of its method validations nor of the Standard Operating Procedures required to conduct routing testing.

Reliable testing requires validation of the techniques and the documentation of how to conduct the testing, including all necessary controls, standard samples and quality assurance steps. Methods generally accepted in the field do not need to be revalidated as to acceptability but the laboratory needs to have documentation that it has put in place an acceptable implementation of the established method.

2.1.1.5 Calibrations

The laboratory does not have an adequate program for calibration and maintenance of its instrumentation.

Accurate analysis depends on instrumentation being properly calibrated and maintained. The laboratory needs to derive policies and procedures and to ensure that they are implemented.

2.1.1.6 Case records

The laboratory case records do not meet the standards required for accreditation.

These requirements are extensive and demanding. However they are designed to ensure that the laboratory is able to substantiate the findings and conclusions made by its examiners.

2.1.1.7 Records review

The laboratory does not conduct adequate peer and administrative reviews of its reports.

The goal of the laboratory quality systems must always be to obtain the correct answer first time. However the consequences of testing in a crime laboratory are such that it must be a management requirement that reports be reviewed for technical and administrative accuracy before the report is issued. The SCL devoted only 0.05 FTE to this in 2000.

2.1.1.8 Testimony review

The laboratory does not conduct an annual review of the testimony of its examiners.

Testimony is the end product of crime laboratory testing. The laboratory test results must be conveyed to the attorneys and judges in a way that is accurate, complete and understandable.

2.1.1.9 Corrective action procedures

The laboratory does not have a corrective action procedure in writing and in use.

Quality system audit and review are important to operational standards, but it is the presence of an effective corrective action process that makes it so. Unless

opportunities for improvement identified at audit can be corrected in a way that addresses the root cause of the problem, failures will recur.

2.1.1.10 Proficiency testing

The laboratory does not meet the ASCLD/LAB standard for proficiency testing of individuals or of analytical disciplines.

Proficiency testing is used to demonstrate that analysts and testing areas are maintaining appropriate levels of competence. It is how a laboratory demonstrates the validity of its work. The information provided to us by the SCL did not show purchase of any proficiency test materials in 2000.

2.1.2 Physical plant

2.1.2.1 Access control

Access to the operational area of the laboratory is not controlled and limited. We were able to walk freely through the main laboratory facility with no physical or personnel access control.

Access control and physical plant design are important contributors to safety. Although the laboratory has better access control to its firing range, the location of this in the garage area of a house-style building that is used by other people for other purposes is a significant and unacceptable safety hazard.

Integrity of evidence and of data requires that the access to all operational areas is controllable and limited through perimeter security and some system of locks. There must be an effective out-of-hours monitoring system. Safety of staff and others is being compromised to an unacceptable degree by the physical layout of the firing facility.

2.1.2.2 Accommodation quality

The laboratory has an average of about 270 square feet of laboratory per examiner/technician. This is not adequate. The physical layout is cluttered and poorly planned.

The American Society of Crime Laboratory Directors¹ and the NIJ Publication on Crime Laboratory Design² recommend 1,000 sq ft per person. The review of 19 local laboratories in California³ found that the better laboratories had more than 650 sq ft per person.

The SCL recognizes inadequate space is the major factor preventing better service delivery, and has not seen any improvement over the last year.

2.1.3 Personnel

2.1.3.1 Training

The laboratory does not have a formal training program for its staff. The budget allocation is all used for attendance at meetings and workshops but there is no program for systematic skills development. The budget is insufficient.

When budgets are limited, training is often the first area to be cut back. This is not a good practice. For example, two persons exonerated by post-conviction DNA testing are currently suing the City of Chicago on the basis that it failed to meet appropriate standards for duty of care. Allegations of inadequate training are an important part of the case. A budget of about \$1,000 per person each year is recommended. The budget needs to be used to deliver a planned and appropriate training program for skills development and reduce the proportion used for meeting attendance.

2.1.3.2 Workload and case turn round

The average number of cases per analyst and turn round times are within the range considered acceptable for a laboratory of this size.

The SCL is commended on being able to turn round most of its cases quickly enough to meet the needs of its users.

2.2 Department of Health Forensic Science Laboratory

The Department of Health Forensic Science Laboratory (FSL) is housed in 5480 square feet within the Department of Health laboratory building. The FSL mainly provides Toxicology, Controlled Substance and DNA services, and training to the Medical Examiner and local law enforcement agencies.

The Findings for the FSL are presented below in the format:

- Area assessed in ***bold italic type***
- Finding in regular type
- Comment on the Finding in *italic type*

2.2.1 Management and Operations

2.2.1.1 Budget

The laboratory does have a budget but it is a secondary item on the health department laboratory budget.

Good fiscal practice within the budget for the overall health department laboratories is not necessarily in the best interests of the FSL. For example, when we were there we were party to discussions on a proposed integrated DNA laboratory. The proposal made considerable sense from the point of view of the best use of the Department funds but would have resulted in a facility that did not meet the National QA Standards for Forensic DNA Testing.

2.2.1.2 Evidence control

Evidence control is generally good but needs some attention to detail. There is a physical plant issue on DNA which compromises evidence integrity there.

Control of evidence integrity is one of the most important aspects of management and operations in a forensic laboratory. The accreditation standards in the area are very demanding and no slippage is permitted.

Operations in DNA are required to meet the National QA Standards in addition to participation in the voluntary ASCLD/LAB accreditation program. The DNA standards require that the post-amplification room is separate from the other areas where DNA work is performed. However the separation must be such that the post-amplification room is not a pass-through area. The layout of the pre- and post-amplification areas in the DNA laboratory makes the post-amplification laboratory as pass-through to the pre-amplification area.

The DNA laboratory space is on the same floor as the Medical Examiner's facility and security depends on the laboratory doors being locked. We observed that this security was not always in place.

2.2.1.3 Quality management

The laboratory Director acts as quality manager. The quality manual is not yet fully developed. The laboratory does not have a program or record of successful completion of annual audits and reviews of its quality system required under the ASCLD/LAB program.

The work completed so far on the laboratory quality system is very good. However much remains to be done. It is best that laboratories have an independent quality manager reporting to the director. A laboratory with 18-20 testifying staff members requires one FTE dedicated to quality management.

The conducting of an annual audit and review of the quality system is the essential step to ensure that the laboratory's quality system continues to develop and does not become inadequate.

2.2.1.4 *Records review*

The laboratory does not conduct adequate peer and administrative reviews of its reports.

The goal of the laboratory quality systems must always be to obtain the correct answer first time. However the consequences of testing in a crime laboratory are such that it must be a management requirement that reports be reviewed for technical and administrative accuracy before the report is issued.

2.2.1.5 *Testimony review*

The laboratory does not conduct an annual review of the testimony of its examiners.

Testimony is the end product of crime laboratory testing. The laboratory test results must be conveyed to the attorneys and judges in a way that is accurate, complete and understandable.

2.2.1.6 *Corrective action procedures*

The laboratory does not have a corrective action procedure in writing and in use. However it does have records that show that it responds to issues brought to its attention.

Quality system audit and review are important to operational standards, but it is the presence of an effective corrective action process that makes it so. Unless opportunities for improvement identified at audit can be corrected in a way that addresses the root cause of the problem, failures will recur.

2.2.1.7 *Management information*

The laboratory is commended on its laboratory information program.

2.2.2 **Physical plant**

2.2.2.1 *Access control*

Access to the operational area of the laboratory is not sufficiently well controlled and limited.

Integrity of evidence and of data requires that the access to all operational areas is controllable and limited through perimeter security and some system of locks.

There must be an effective out-of-hours monitoring system. Mention has been made of the breaches in the loading area doors and the DNA area.

2.2.2.2 Accommodation quality

The laboratory has an average of about 288 square feet of laboratory per examiner/technician. This is not adequate. The physical lay-out is cluttered and poorly planned.

The American Society of Crime Laboratory Directors¹ and the NIJ Publication on Crime Laboratory Design² recommend 1,000 sq ft per person. The review of 19 local laboratories in California³ found that the better laboratories had more than 650 sq ft per person.

The FSL recognizes inadequate space is the major factor preventing better service delivery in DNA, toxicology and alcohol, and has not seen any improvement over the last year. The DNA laboratory is particularly poorly provided for in regards to the national norms for floor area.

2.2.3 Personnel

2.2.3.1 Training

The laboratory's training budget is about one-third of what it should be.

When budgets are limited, training is often the first area to be cut back. This is not a good practice. For example, two persons exonerated by post-conviction DNA testing are currently suing the City of Chicago on the basis that it failed to meet appropriate standards for duty of care. Allegations of inadequate training are an important part of the case. A budget of about \$1,000 per person each year is recommended. The budget needs to be used to deliver a planned and appropriate training program for all staff. The laboratory faces a problem since it provides a DNA service. The National QA Standards for Forensic DNA Testing require that every analyst receives at least one training exposure in a DNA-related area each year. The budget and accompanying program for the laboratory must be sufficient to meet this requirements and also provide reasonable training for everyone else.

2.2.3.2 Workload and case turn round

The average number of cases per analyst and turn round times are within the range considered acceptable for a laboratory of this size.

The FSL is able to turn round most of its cases quickly enough to meet the needs of its users. It is commended on the way that it dealt with a major backlog problem in toxicology. However it needs to be aware that there may be a problem building with controlled substances.

It also needs to be aware that it has taken too long to bring its DNA STR analysis on-line. Several of the stakeholders identified the lack of STR analysis service as a problem. If the time taken to implement STR analysis is indicative of the time that it will take to turn round DNA cases, there will very soon be an unacceptable backlog.

The laboratory needs to visit some efficient DNA testing laboratories to see how they deal with work organization for biology screening and DNA analysis.

2.2.3.3 Minimum caseload levels

There are some instances where there is a minimum caseload needed either to maintain technical skills or to provide a cost effective service. The State is faced with examples of these in firearms and in DNA data base testing.

The preferred methodology for detection of gunshot residues (SEM – EDX) requires costly instrumentation. The minimum workload to make this a cost-effective service is about 5 cases per month. The demand in Rhode Island is 5 cases per year.

The FSL is currently having problems implementing an STR service in DNA. There is a backlog of about 650 cases to be analyzed for data base submission. It would make operational and economic sense to outsource these to one of the many data basing laboratories rather than to burden the FSL with them.

2.3 Stakeholder evaluations

2.3.1 Service strengths

Stakeholders view forensic science in Rhode Island as well-qualified professionals providing a high quality service.

2.3.2 Service weaknesses

However, they see this high quality service being provided in spite of several weaknesses. There is concern, as one high-level stakeholder expressed it, that there may be a “forensic train crash coming up if we are not careful”.

Analysis of the stakeholders’ concerns identified the following major issues:

- Limited range of services provided, especially the lack of DNA STR testing
- Located in agencies without stake in law enforcement – unshared mission and a resulting lack of support from core agencies responsible for resourcing

- Bifurcated lab system, with fragmented analysis and communication due to two separate locations and a possible loss of evidence
- Discontinuity of services – not easy to get a case completely analyzed without having to make numerous phone calls
- Lack of commitment for training staff & continuing education
- Lack of statewide commitment to provide forensic resources
- Lack of accreditation and concern at evidence security and physical plant limitations in general

Recommendations

3.1 Overview

There are many issues of service quality and effectiveness that require attention. However, the overall administration of forensic services should be addressed first otherwise resource expended on remediation could be wasted.

3.2 *Administration of forensic services*

3.2.1 *Characteristics of an ideal service*

On the face of it, the current administration of forensic services in Rhode Island could be regarded as a model. A list of the characteristics of an ideal forensic service would include:

- Scientific integrity
- Scientific excellence through training, education and research
- Ability to deliver a service that meets the needs of the justice system for reliable timely evidence in the investigation and at trial
- Access to best practice methodologies

Considering each of these in turn shows that, contrary to first impression, there is no benefit to the service from the present administrative arrangements.

Commentators often interpret “Scientific integrity” as “independence from police”. The location of SCL and FSL could thus be viewed in a positive light. However, scientific integrity addresses the ethics of the forensic service. It reflects the ethics and values of the director and staff: if these are questionable, so is the scientific integrity of the service no matter what the administrative arrangements may be. The current locations of the SCL and FSL are thus neither an advantage nor a disadvantage to the level of scientific integrity.

Scientific excellence depends on resources and values. If the budget is adequate and the leadership is committed to quality, then the forensic services will have excellent standards of operation. Administrative location cannot compensate for under-resourcing or poor leadership.

The former Metropolitan Police Forensic Science Laboratory in London, England, serves as an example of the principles enunciated in these two factors. This was universally regarded as one of the 3 best laboratories in the world. It was an integral part of the Police Force, but the Director was given almost complete autonomy for operations and was always an eminent scientist. Economic and political factors, rather than performance ones, have resulted in it being subsumed in the English Home Office Forensic Science Service.

In contrast, one of the infamous forensic disasters of modern times, the “Dingo baby” case in Australia, was a result of poor science delivered from a non-police laboratory which did not meet the standards of scientific integrity and excellence.

Investigators and courts require that forensic science provides thorough, accurate and timely evidence, with a reasoned and understandable interpretation of the underlying facts. The relative weight given to the individual factors is situational but none can be dismissed. The service has to understand these needs. Indeed it could be argued that the service should not be allowed to become remote from the justice system.

There are many ways to define “best practice methodologies”. However, general acceptance in the field of forensic science is one element that has been identified by the courts, first in 1922 with Frye ⁴ and more recently with Daubert ⁵.

3.2.2 *Forensic science and the justice system*

It should be clear from 3.2.1 that the review team is not convinced that there is any advantage to the administration of justice in Rhode Island in the current arrangements for forensic services. Indeed we find that they are disadvantaged.

The reasons are many but eventually come to forensic science being part of the justice system. A laboratory based in a university is part of the university community dedicated to open learning and furtherance of knowledge. A laboratory based in a health department is part of the State’s commitment to public health. Provision of a **forensic science service** is therefore a secondary issue for a university or a public health department; the first because it is a service and the second because it is forensic.

The State must recognize that its forensic services are part of the administration of justice and make administrative arrangements accordingly. There is an added benefit for fiscal management. This is that users are best suited to place a value on the service. Placing responsibility for running the service and accountability for its performance with an agency somewhere within the justice administration will make for informed fiscal management.

Finally, we concur with the many stakeholders who identified the need to bring the two laboratories together into a single service. The term “**rationalization**” was used. This captures the reasons well – while there may be arguments on having a laboratory in a university or as part of a larger laboratory services

agency there is no rational reason for separation of the service delivery into two distinct sites.

3.2.3 *Administrative location of a single forensic science service laboratory*

3.2.3.1 Model 1:

Administered by the Department of Health as part of the Medical Examiner's office.

The present laboratories would be rationalized into one reporting to the ME in the Department of Health.

*In contrast to what we have argued for the FSL, a case can be made that the Department of Health is an appropriate location for the ME's laboratory. One aspect of the work of the FSL is to provide a toxicology service to the ME. If the ME is already accountable for one "forensic" laboratory it could be argued that **all** laboratory service could be part of the ME's responsibility.*

The Director of the forensic laboratory would report to the Medical Examiner. This model has not been discussed with the ME or the Department of Health and we are unaware of how they would regard it.

This model is not favored by us as it is a poor response to the issues presented in 3.2.2 regarding integration of the forensic laboratory within the justice system.

Various combinations of the pathology service, toxicology service and crime laboratory service could be considered within the overall concept, including removing all the ME-related laboratory testing to a facility independent of the Medical Examiner's office. We see no advantages in these variations.

3.2.3.2 Model 2

A unit within the Rhode Island State Police

This model has the laboratory Director reporting to the Commander of the Rhode Island State Police, funded through an identified line item in the police budget.

This model satisfies all of the issues dealt discussed in 3.2.2.

However, there are some 40 agencies in addition to the Sate Police that use the existing forensic services. The State Police budget would need to be increased so that the line item budget met the costs of the statewide services. Also some mechanism would need to be put in place to recognize that the State Police was, overall, a minority user. Finally, it would be in the interests of the image of the service to find a way to deal with some of the issues of independence identified in 3.2.1.

A similar model was discussed during the information-gathering phase when we met with Colonel Culhane. He expressed a readiness to accept the responsibility

and accountability for service provision, provided that the budget contained a line item dedicated the provision of services on a statewide basis.

3.2.3.3 Model 3

An independent unit with oversight from the existing University of Rhode Island advisory council

This is the polar opposite to model 2. It has all the advantages and disadvantages of location in a university that were discussed in 3.2.1.

We do not favor this model as it makes the service too remote from the users in the justice system.

3.2.3.4 Model 4

An integrated laboratory responsible to the Rhode Island Justice Commission

The laboratory would be funded through a line item administered by the RIJC.

The RIJC could choose to establish a forensic services committee if this model were chosen. The model has the advantage of placing the service in a neutral agency but within the State's justice system.

It would involve a change to the Commission's operations but is possibly within its mission, taking the JLPSN and the objective of "initiate and support programs designed to impact crime and/or improve the criminal and juvenile justice system" as examples.

However, we are not certain that this model could provide the best line accountability for forensic science service provision.

3.2.3.5 Model 5

A Forensic Services Division of the State Police with an oversight committee that reports to the Governor

This model combines the best aspects of models 2 and 4.

The main difference is the creation of the Forensic Services Committee within the RIJC as an oversight body.

3.2.3.6 Model 6

A Forensic Services Division within a Department of Public Safety

We understand that the State has considered on occasion the creation of a Department of Public Safety.

If this were to occur, then the forensic services could be located within the DPS. Depending on the exact administrative arrangements adopted for the department,

this could be a very satisfactory way to achieve accountability within the Justice System while maintaining scientific independence

3.3 Service quality

Shortcomings were found in:

- Evidence control
- Quality management
- Test procedures
- Calibration and maintenance
- Case records maintenance and review
- Testimony review
- Corrective action procedures
- Proficiency testing
- Access control
- Training programs

Each of these is classified by ASCLD/LAB as an area that directly affects and has fundamental impact on the work product of the laboratory or the integrity of the evidence.

While the review found no evidence of inaccurate testing or conclusions having been reported, these deficiencies must be remediated as matter of urgency. If an inaccurate test result or conclusion were to be reported in the future and if no action had been taken, the State could be held to have failed to satisfy its duty of care obligations.

It is estimated that remediation will take about 2 years to implement and require about 2 full time equivalents to manage. Some of this could be achieved by diverting resources on a temporary basis. However, there is a requirement for a new full time equivalent staff position as Quality Manager and for increased training and equipment budgets on a recurring basis. The overall one-time cost should be of the order of \$285,000 for implementation and \$100,000 per year recurring.

3.4 Administration of the laboratory

3.4.1 Management

The laboratory requires a Director with proven ability as a senior forensic science manager. It needs a dedicated Quality Manager and a dedicated manager responsible for Training and for Research & Development.

3.4.2 *Staffing*

The laboratory needs the following operational staff:

- Controlled substances, 3 FTE
- Biology/DNA, 5 FTE
- Trace evidence, 2 FTE
- Toxicology, 5 FTE
- Firearms, 2 FTE
- Latent prints, 1 FTE
- Breath analysis, 3 FTE

The laboratory needs to identify the correct number of administrative and support staff.

3.5 **Recommendations**

- 3.5.1 The existing laboratories (FSC and FSL) are rationalized into a single service laboratory.
- 3.5.2 The laboratory is a division of the Rhode Island State Police with the administrative and staffing structure shown in Figure 1.
- 3.5.3 The RIJC establishes a Forensic Service Committee to provide oversight of forensic services. The oversight includes:
- Advice on budget
 - Performance monitoring
 - Approval of training, research and quality assurance programs
 - Monitoring of service provision to agencies outside of the State Police
- 3.5.4 The laboratory be housed in accommodations not part of the Health Department or of the University of Rhode Island.
- 3.5.5 The laboratory space is 30,000 square feet.
- 3.5.6 The Director is someone with a proven record at senior management level in an accredited full service forensic science laboratory.
- 3.5.7 A Quality Assurance Manager and a Manager of Training and R&D are appointed from within existing personnel resources.
- 3.5.8 The laboratory develops and implements a program to achieve accreditation by December 31, 2002.

- 3.5.9 A one time budget supplement of \$285,000 is provided for accreditation preparation.
- 3.5.10 The annual budget of the laboratory is not less than \$2.6 million of which \$125,000 is used for equipment and \$30,000 is used for training.

Chapter 4

Appendices

4.1 Vitae of investigators

4.1.1 *William J Tilstone*

PERSONAL

Born March 27, 1943, Ayr, Scotland. British Citizen, US Green Card.

EDUCATION

University of Glasgow, 1961 - 1965; B Sc 1st Class Honors
University of Glasgow, 1965 - 1968; PhD "Studies on metabolic changes and trauma"
Royal College of Pathologists, 1976; Member by examination of published works.
(Fellow, 1986)

APPOINTMENTS

Lecturer in Pathological Biochemistry, University of Glasgow, 1968 - 1972

Lecturer in Forensic Science, University of Strathclyde, 1972 - 1979

Professor and Head, Forensic Science, University of Strathclyde, 1979 - 1984

Director of Forensic Science, Government of South Australia, 1984 - 1996

Executive Director, National Forensic Science Technology Center, 1996 -

Courtesy Professor in Forensic Science, University of Central Florida, 1996 -

RELEVANT EXPERIENCE

Consultant, Forensic Serology, Public Prosecutor for Paisley and Greenock Districts, Glasgow, 1973 - 1984

Member of Council Forensic Science Society 1976 - 79

Editor Journal of the Forensic Science Society 1979 - 86

Vice President International Association of Forensic Science 1981 - 84

Advisor on Clinical Pharmacokinetics, Glasgow Area Health Board 1982 - 84

Grant reviewer ARC Australia, 1992 - 2000

Consultant in Forensic Science, Government of Malta, 1982 - 84

Consultant in Forensic Science, Government of Bahrain, 1993

Member State Government Review of Forensic Science Services, South Australia, 1984 - 85

Member State Government Forensic Science Advisory Committee, South Australia, 1986 - 1996

President International Association of Forensic Science 1987 - 90

Member Executive Council National Association of Testing Authorities of Australia (NATA) 1989 - 1996

Member Board of Control National Institute of Forensic Science, Australia 1990 - 96

Member Delegate Assembly ASCLD-Laboratory Accreditation Board (first non-US member) 1990 - present

Lead Auditor Triennial Statutory Review of SAMCOR (South Australian Government) 1990 and 1993

Consultant, Forensic Toxicology, Attorney-General's Department, State of Victoria, 1991

Member Board of Directors American Society of Crime Laboratory Directors (ASCLD) 1992 - 95 (first non-North American so honored)

Accreditation inspector, ASCLD/LAB, 1992 - 1996

Advisor, Government Agency Review Group, South Australia, 1992

Member South Australian State Government Change Management Directorate - State Services, 1993

Member Registration Advisory Committee for Forensic Science, NATA, 1993 - 96

Acting Director and Auditor, Office of Fair Trading, Government of South Australia 1993

Member State Government Senior Executive Development Reference Group, South Australia, 1995 - 96

Member Board, Human Identification Trades Association, 1996 -

4.1.2 Kevin L. Lothridge

EDUCATION

Master of Science in Management
National Louis University, December 1992.

Bachelor of Science in Forensic Science.
Eastern Kentucky University, May 1984.

PROFESSIONAL EXPERIENCE

1984	Forensic Chemist, Pinellas County Sheriff's Department
1986	Forensic Chemist, Pinellas County Forensic Laboratory
1988	Chief Forensic Chemist, Pinellas County Forensic Laboratory
1995	Forensic Laboratory Director, Pinellas County Forensic Laboratory
1998	Deputy Director, National Forensic Science Technology Center

TEACHING EXPERIENCE

1984-present Adjunct Faculty St. Petersburg Junior College Public
Safety Institute and Multijurisdictional Drug Task
Force, Forensic Aspects of Drugs of Abuse
(This training has been given over 30 times since 1984)

PROFESSIONAL SERVICE

Midwestern Association of Forensic Scientists
Southern Association of Forensic Scientists
American Academy of Forensic Sciences, Fellow
American Chemical Society

American Board of Criminalistics, Fellow
American Society of Crime Laboratory Directors, President 1996-97
Canine Accelerant Detection Association, Board of Directors 1992-1996

COMMUNITY SERVICE

1984-present Speaker on behalf of The Pinellas County Forensic
Laboratory to local, national and international groups

1984-present Guest Speaker/Career Day participant at local schools

1990-present Member of Pinellas County Drug Free Schools Care Council

RESEARCH PUBLICATIONS

"The Use of Activated Charcoal Strips for Fire Debris Extractions by Passive Diffusion.
Part 1: The Effects of Time, Temperature, Strip Size, and Sample Concentration."
Journal of Forensic Sciences, JFSCA, Vol. 41, No. 3, May, 1996, pp. 361-370.

"An Evaluation of 42 Accelerant Detection Canine Teams,"
Journal of Forensic Sciences, JFSCA, Vol. 40, No. 4, July, 1995, pp. 561-564.

PRESENTATIONS, WORKSHOPS, AND OTHER PUBLICATIONS

August 1996 The Internet for Forensic Scientists, (Workshop) Co-Chair
International Association of Forensic Scientists meeting,
Tokyo, JP

May 1996 The Internet for Forensic Scientists, (Workshop) Co-Chair
Southern Association of Forensic Scientists meeting,
Auburn, AL

April 1996 Electronic Communications for Forensic Science,
(Invited Lecture) Law Enforcement & Corrections Technology
Conf., Los Angeles, CA

February 1996 The Internet for Forensic Scientists, (Workshop) Co-Chair
American Academy of Forensic Sciences meeting,
Nashville, TN

January 1996 Statistics for Forensic Scientists (Workshop) Co-Chair, Hosted
by the National Forensic Science Technology Center, St.
Petersburg, FL

September 1995 The Internet for Crime Laboratory Directors (Workshop),

Annual ASCLD meeting, Quantico, Va.

- August 1995 Use of the Internet to find Information useful in Fire Investigation. (Invited Poster) International Symposium on the Forensic Aspects of Fire Investigation, Sponsored by the FBI, Washington, D.C.
- March 1995 Chemical Destructive Devices, (Invited Lecture) PARCO Training Conference, SPJC Allstate Center, St. Petersburg, FL
- February 1995 The Internet for Forensic Scientists, (Workshop) Co-Chair American Academy of Forensic Sciences meeting, Seattle, WA
- September 1994 Managing a Forensic Laboratory, (Invited Lecture) American Society of Crime Laboratory Directors Meeting, FBI Academy, Quantico, VA
- September 1994 Proper Maintenance of Accelerant Detection Canines, (Juried Paper Award Winner) Southern Association of Forensic Scientists, Orlando, FL
- September 1994 Internet for Forensic Scientists, (Workshop) Co-Chairman Southern Association of Forensic Scientists, Orlando, FL
- September 1993 Computer Systems Used By The Pinellas Co. Forensic Laboratory, (Invited Lecture) American Society of Crime Laboratory Directors Meeting, FBI Academy, Quantico, VA
- April 1993 Fire Debris Analysis. (Training Course) Co-Chairman Continuing Education, Crime Lab Council, St. Petersburg, FL
- November 1992 Laboratory Role in Fire Investigation, (Invited Lecture) Pinellas County State Attorney's Office, Clearwater, FL
- September 1992 Laboratory Role in Fire Investigation, (Invited Lecture) South Carolina IAAI Meeting, Columbia, SC

COURTROOM EXPERIENCE

- 1984-present Controlled Substances Expert Testimony (100 +)
- 1990-present Trace Evidence Expert Testimony
(Fire Debris, 6 times, Accelerant Detection Canines, 3 times)

4.1.3 *David M. Epstein*

EDUCATION

April 1982 University of Central Florida, Orlando; Bachelor of Science, Forensic Science; Minor, Chemistry

EXPERIENCE

1982 - 1991: Forensic Chemist, Acadiana Criminalistics Laboratory

1991 - 2000: Director, Acadiana Criminalistics Laboratory

2000 – present: Director of Scientific Services, NFSTC

PROFESSIONAL ORGANIZATIONS

American Academy of Forensic Sciences

American Society for Testing and Materials (ASTM), Committee E-30 on Forensic Sciences, Fire Debris Task Group

American Society of Crime Laboratory Directors, Treasurer 1995 - 1998, Electronic Communications Committee Chair & Web Site Manager, 1998 - present

California Association of Criminalists

Louisiana Association of Forensic Scientists, Former President

Louisiana Association of Scientific Crime Investigators, Former President

Louisiana Board of Crime Laboratory Directors and Administrators, Vice President, 1994 - present

Southern Association of Forensic Scientists

Southwestern Association of Forensic Scientists

CERTIFICATION

Diplomate, American Board of Criminalistics, Certificate 549

Current at-large member of Board of Directors (ASCLD nominee)

Fire Debris Task Group, SAFS

CONTINUING EDUCATION

Achieving Excellence in Supervision, LSU Public Management Program, 3.6 CEUs

Advanced AmpF/STR™ & ABI Prism™ 310 Genetic Analyzer

Advanced Interpretation of Mass Spectra, SWAFS

Arson Accelerant Detection, ATF

Association of Firearm and Tool Mark Examiners

Annual Training Seminars - 1982, 1983, 1991 & 1994

Basic Drug Chemistry, LABCLDA

Basic Serology, Elizabeth Quarles, SAFS

Blood Alcohol Testing, Louisiana State Police

Blood Stain Evidence, Herb MacDonell

Chromatographic Methods in Forensic Science, FBI

Clandestine Laboratory Synthesis, DEA

Cost Effective Processing for Latent Prints & Shoe Impressions, MAFS/SAFS

DNA Typing, SWAFS
Effects of Alcohol, James Garriot, Ph.D., SAFS
Forensic Microscopy, Walter McCrone
Hair Comparison, SWAFS
International Symposium on Setting Quality Standards for the
Forensic Science Community, FBI
International Symposium on the Forensic Aspects of Controlled
Substances, DEA & FBI
Internet for Forensic Scientists, SAFS
Laboratory Analysis in Arson Matters, FBI
Laboratory Auditing, National Forensic Science Technology Center
Laboratory Quality Assurance, FBI
Mass Spectrometer Operator & Maintenance Training, Hewlett-Packard Co.
Media Relations - How To, SWAFS
Sig-Sauer Law Enforcement Armorer's Course
Symposium on Crime Laboratory Development, FBI, 1991-1998

TRAINING GIVEN & PRESENTATIONS MADE

Basic Fire Debris School, Lab Instructor - ATF/SAFS 1989
"Implementing Advanced Computer Technology in Forensic Laboratories," IAFS,
Tokyo, 1996
Internet for Forensic Scientists - MAFS/SAFS 1995, IAFS 1996, SAFS 1996,
AAFS 1997

MANAGERIAL EXPERIENCE

Auditing - After receiving Laboratory Auditing training, I have participated in five pre-ASCLD/LAB audits for the NFSTC (Kansas Bureau of Investigation, Oklahoma Bureau of Investigation, Los Angeles County S. O., Palm Beach County S. O. and Massachusetts State Police), the most recent as team captain in Massachusetts. Additionally, I partnered with Kevin Lothridge to perform audits covering the laboratory information management systems of two statewide laboratory systems (Illinois State Police and Colorado Bureau of Investigation).

Budgeting and Planning - As director of a stand-alone crime lab, I have been responsible for all planning and budgeting functions since 1992. There being no parent agency, I have arranged for all services needed by the Acadiana Criminalistics Lab, including liability, property, and workers' compensation insurance, salary scales, personnel fringe benefits (health insurance, retirement, deferred compensation, cafeteria plans, and supplemental insurance), transportation and training, equipment and supply procurement, hiring, basic physical plant needs (electricity, water, sewerage, telephony, security, waste disposal, and maintenance), and professional service (annual financial audits, proficiency tests, and external audits and inspections). Each year an external financial audit by a private CPA firm, reviewed by the Louisiana Legislative Auditor, has affirmed sound accounting practices by this laboratory.

Grant Procurement and Management - Since 1988 I have overseen the procurement and management of 12 federal and state grants, which have provided \$648,873 for personnel, equipment, supplies, contractual services, and

training. Of the total, \$113,963 was obtained to provide training for about 240 students from Louisiana's eight crime laboratories. These students were offered 16 courses covering basic and advanced topics in trace evidence, fire debris, firearms, toolmarks, microscopy, laboratory auditing, bloodstain pattern interpretation, expert testimony and communications, blood alcohol testing, DNA, and evidence control. The average class lasts 4 days and cost \$475 per student, including room and board.

4.2 Description of methodology

Proposed Methodology

NFSTC will review service provision and technical capability through on site inspection, survey of service providers and users, and workshops. NFSTC permanent staff and contractors will conduct the technical and infrastructure reviews. The personnel and procedures used will be those proven to be effective in previous projects successfully completed by the offeror.

A key success factor for successful organizational change incorporated in the proposal is the formation and use of a Forum group of staff members from the service provider laboratories.

Background

In addition to addressing analysis of conformance with Standards and Regulations, the stated General Purpose and Desired Results include:

- Interviews with users, prosecution, defense and judiciary,
- A planning workshop
- Two separate references to factors causing delays in examinations
- An opinion on consequences of recommended actions

The methodology to be used is described below. Each section concludes with a time frame which is the number of weeks from start of the project that the activity is planned to start and end. The final section is a Gant chart showing all the phases and time frames.

There are four phases in the proposal:

1. Surveys,
2. Site visits,
3. Workshops,
4. Data analysis and reporting

NFSTC Resources

NFSTC will resource the project off site from its offices and on site in Rhode Island.

State of Rhode Island Resources

NFSTC has elected to adopt a methodology it has used with considerable success in other situations. That is the creation and involvement of a Forum

group randomly chosen from a cross section of all positions and grades in the affected facilities. The reasons are:

- This gives better information on the true operational situation
- It involves the whole organization in the data collection and analysis and so creates an understanding within the forensic service providers of the problems to be faced
- By engaging everyone it sets an environment for successful implementation of recommendations – they become “our” solutions

However it is important that the costs of the process are recognized – the State will need to accept the loss of production during involvement with the review.

The plan for Forum establishment and utilization is:

All staff will be sent an outline of the project and an invitation to participate. The responses will be reviewed by NFSTC and divided into about 15 groups representing management, supervisors, bench staff and support staff and covering the main disciplines in each laboratory. Approximately 2 weeks before the start of the project, NFSTC will hold a Town Meeting to introduce the consultants and the project, and select the Forum members.

The Forum members will be given instruction on problem solving and auditing and used in focus groups to collect information. The Forum group will also be used for the first evaluation of the data collected in the surveys and the preliminary recommendations, so that there is a feet-on-the-ground reality check of the data and conclusions.

Surveys

Two survey instruments will be developed, each tailored to the program needs, but based on those used by NFSTC in previous needs analyses. The surveys will be based on the checklists for recognized operational standards and regulations, and the NIJ standards for crime laboratories.

The first instrument will identify the information required including but not limited to: staff numbers, case numbers, case backlogs, case turn-round time, resource expenditure on categories such as consumables, equipment, quality assurance, training, salaries of professional and support staff, performance trends, example management reports, and laboratory physical plant and size. The second will seek the views of users on the standards of service required and delivered, and the impact of any shortfall on the administration of justice.

Drafts will be evaluated by NFSTC and nominated personnel from the State Teams before the final version is released.

Site visits

Each site will be visited by either NFSTC staff or Forum members, and evaluated against accepted operational standards. The objective is to provide objective information on key issues such as evidence integrity, technical capacity and competence, analyst knowledge, efficiency and effectiveness of organizational structures, quality of the physical infrastructure, and effectiveness of quality system design and implementation. Information sources will be interview of staff and management, review of documentation, and inspection of physical plant and procedures.

Workshops

Efficiency and effectiveness are achieved when the needs of the users are known and there are procedures and practices in place, which enable the provider to meet them, within the resources, which can be made available.

The project plan includes three workshops involving the Forum members and directed to these ends.

4.3 Survey Instruments

4.3.1 Laboratories

SURVEY

** NOTE: Where the survey requests a response as FTE please total the time spent on the activity and express it as the number of full time equivalent positions. The grade or salary of the position does not matter. Thus if you have 10 analysts of various grades each of whom spends about 4 hours per week on file review, this is 4/40x10, or 1.0 FTE.*

A: Financial resource Management

Annual salary budget (including fringes) of your laboratory:

Annual equipment budget of your laboratory:

Annual training budget for lab personnel:

Annual consumable supply budget of your laboratory

Total annual budget including all of the above:

Does your laboratory have a capital equipment replacement plan

Y / N

Provide capital equipment inventory showing equipment, purchase price, date of purchase, estimated utilization (h/month) (Attachment 'A').

B: Human Resource Management

Number of full-time testifying analysts:

Number of full-time technical support staff members:

Number of supervisory staff:

Laboratory floor space (square feet):

Provide a dimensioned floor plan. (Attachment 'B')

What are your laboratory's major training shortfalls, if any? (Briefly describe)

C: Quality Management

Annual resource commitment to QA:

Proficiency test purchase (\$)

PT program management (FTE*)

File review (FTE)

Quality system maintenance (FTE)

Is there a position identified as Quality Manager:

Y / N

In what areas, if any, do you see a need to improve quality of your laboratory's system or operations? (*Briefly describe*)

Does your laboratory have a quality manual? (Attachment 'C' – electronic copy preferred).

D: Information Management

Does your laboratory have an Automated Laboratory Information System (LIMS):
Y / N

If "yes" please complete the following

Area	Use a lot	Use some times	Do not use or use rarely
Data capture and manipulation from instrumentation			
Evidence tracking			
Report writing			
Analyst performance monitoring			
Case turn round time monitoring			
Case management			

Does your laboratory have a Management Information System that is not part of a LIMS: Y / N

If “Yes” please complete the following

Area	Use networked computer	Use standard online computer	Use manual records
Evidence tracking			
Analyst performance monitoring			
Case turn round time monitoring			
Case management			
Financial or budget management			

Please submit example management reports (Attachment ‘D’)

E: Performance Management

Does your laboratory have performance goals
Y / N

Does your laboratory survey users for information on their needs
Y / N

Does your laboratory survey users on how well you meet their needs
Y / N

Does your laboratory have a performance review / appraisal system
Y / N

If "Yes" please provide a brief description of the system (Attachment 'E').

Does your laboratory compare its performance with that of any other crime
laboratory Y / N

How do you evaluate whether to introduce new testing area (Attachment 'F')

In terms of your primary unit of measurement, for the most recent year for which data have been compiled, enter your estimate of the number received and analyzed.

Primary unit of measurement: _____ (i.e. cases, items, examinations, etc.)

Areas of Analysis	Number Received	Number Analyzed	Turn round time (Average number of days from receipt to case closing)
a. DNA			
b. Firearms, toolmarks			
c. Forensic biology screening			
d. Trace analysis			
e. Latent prints			
f. Fire debris			
g. Explosive residue			
h. Controlled substance			
i. Criminal toxicology (e.g. urine drug screens)			
j. Post-mortem toxicology			
k. Blood alcohol			
l. Questioned documents			
m. Computer crime investigation			
n. DNA data base samples			
o. DNA "no suspect" cases			
p. Latent print database (AFIS)			

q. Impressions (footwear, tireprints, etc.)			
r. Firearms database (Drugfire and/or IBIS)			
s. DNA database samples			

For each of these areas of analysis conducted in your laboratory, indicate which of these factors is preventing better service delivery. Score 0 = “not at all” to 4 = “major factor”

Areas of Analysis	Lack of current equipment	Lack of expertise or training	Demand greater than capacity to meet it	Space limitations	Staffing
a. DNA					
b. Firearms, toolmark					
c. Forensic biology screening					
d. Trace analysis					

s					
e. Latent prints					
f. Fire debris					
g. Explosi ve residu e					
h. Control led substa nce					
i. Crimin al toxicol ogy (e.g. urine drug screen s)					
j. Post- morte m toxicol ogy					
k. Blood alcohol					
l. Questi oned docum ents					
m. Comp uter crime investi gation					
n. DNA data base					

sample s					
0. DNA "No suspec t" cases					
p. Latent print data base sample s (AFIS)					
q. Impres sions (footw ear, tireprin ts)					
r. Firear ms databa se (Drugfi re and/or IBIS)					
s. DNA databa se sample s					

For these same areas of analysis conducted in your laboratory, compare the factors for 2000 to those for 1999. Score 1 = "worse", 2 = "same", 3 = "better".

Areas of Analysis	Lack of current equipment	Lack of expertise or training	Demand greater than capacity to meet it	Space limitations	Staffing
a. DNA					
b. Firearms, toolmark					
c. Forensic biology screening					
d. Trace analysis					

e. Latent prints					
f. Fire debris					
g. Explosi ve residu e					
h. Control led substa nce					
i. Crimin al toxicol ogy (e.g. urine drug screen s)					
j. Post- morte m toxicol ogy					
k. Blood alcohol					
l. Questi oned docum ents					
m. Comp uter crime investi gation					
n. DNA data base sample					

s					
0. DNA "No suspec t" cases					
p. Latent print data base sample s (AFIS)					
q. Impres sions (footw ear, tireprin ts)					
r. Firear ms databa se (Drugfi re and/or IBIS)					
s. DNA databa se sample s					

Using communications and effectiveness in achieving good quality service, please rate the following. Score 0 = "Very bad" to 4 = "Excellent"

Area	Score
Relations with crime scene investigators	
Relations with prosecutor's office	
Relations with other laboratories providing forensic services to the state	

Within your laboratory, how would you generally rate the quality of the following instrumentation presently in use? *Mark one (✓) for each row.*

Instrumentation	Modern Equipment	Old but Serviceable	Modern / Little Room for Improvement	
a. Computers				
b. Fourier Transform Infrared Spectrometers (FTIRs)				
c. Gas				

chromatograph (GC) instruments					
d. Gas chromatograph/ mass spectrometer (GC/MS) instruments					
e. Stereomicroscopes					
f. Compound microscopes					
g. Comparison microscopes					
h. DNA analysis instruments					
i. Other (<i>specify</i>):					
j. Other (<i>specify</i>):					
k. Other (<i>specify</i>):					
l. Other (<i>specify</i>):					

Which of the following tests of evidence is your laboratory likely able to obtain in sufficient time to meet legal and time frame requirements necessary for effective investigation and prosecution? *Enter one of the following code numbers for each type of crime and type of test you consider applicable.*

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		L a t e n t P r i n t s	T r a c e E v i d e n c e	D N A A n a l y s i s	T o x i c o l o g y	C o n t r o l l e d S u b s t a n c e s
a. Homicide						
b. Assault and robbery						
c. Rape and sexual assault						

t						
d. Drivin g under the influe nce						
e. Prope rty crime s – burgla ry, vanda lism, arson						
f. Weap ons offens es						
g. Posse sion of contro lled subst ances						

If your laboratory is unable to analyze all of the evidence submitted to it, indicate the likelihood of analysis for the following types of cases and evidence. *Mark (✓) one for each row.*

Type of Case \ Evidence	U n l i k e l y t o B e A n a	L i k e l y t o B e A n a l	C e r t a i n t o B e A n a l
-------------------------	-------------------------------------------------------------------------	--------------------------------------------------------------------	-------------------------------------------------------------------------

	I y z e d	y z e d	y z e d
a. Possession of controlled substances			
b. Cases involving firearms			
c. Rape and sexual assault			
d. Latent prints from homicide			
e. Latent prints from other crimes			
f. Driving under the influence (DUI)			
g. Other (<i>specify</i>):			

This questionnaire may not have addressed all of the resource or performance-related issues of importance to your crime laboratory. Please use this space or attach additional pages to add comments or clarifications about your laboratory's needs or challenges.

Attachment 'A'

INVENTORY

Please provide an equipment inventory. Provide whatever of the following is available. If your normal records do not include any of the items DO NOT try to obtain and add the information unless it is readily available.

The inventory can be provided in print or electronic form.

Equipment name and model number, purchase price, date of purchase, estimated utilization (h/month)

Attachment 'B'

QUALITY MANUAL

Please provide a copy of your laboratory Quality Manual. Electronic form is preferred (Word, Adobe PDF, or Word Perfect) but print is acceptable.

Attachment 'C'

PERFORMANCE APPRAISAL

Please provide a summary of your performance appraisal system. The summary should identify the basis of appraisal targets, and describe how appraisals are conducted and how the information is used. Please provide copies of any forms used and provide examples of how the information is used in HR and case performance management.

Please make sure that any appraisal of managers is described as well as any "180 degree" or "360 degree" appraisals.

Attachment 'D'

NEW TESTING AREA EVALUATION

Please describe how you evaluate whether to implement new testing areas and how you proceed to quantify the impact on operations. Give examples of how you evaluate the methodology and its impact on service delivery.

4.3.2 Stakeholders

Forensic science services are provided from two separate facilities, the State Crime Laboratory and the Department of Health Forensic Laboratory. The objectives of this survey are to obtain data on how stakeholders view:

- The role of each laboratory as a part of the State investment in public safety
- How well each laboratory satisfies that expectation
- How each laboratory interacts with stakeholders to identify and respond to service needs

1. How does the work of the laboratory affect your work?

Please list the three of the most important ways that some aspect of the laboratory affected your work in 2000. Rate each area A (major impact), B (moderate impact) or C (very little impact).

State Crime Laboratory

Area	Impact

Department of Health Forensic Laboratory

Area	Impact

2. The laboratory's role

Please grade the following roles of the laboratory. Respond separately for the two sites: The State Crime Laboratory and the Department of Health Laboratory/Forensic Sciences. Please rate each area for its importance to preserving public safety, using the scale: "A" (major), "B" (moderate) or "C" (minor), and for how well it meets your needs using the scale: "A" meets needs very well, "B" meets needs somewhat or "C" does not meet needs. If you do not use the services of one or both laboratories, please complete the "Role" and "Importance" columns and enter "N/A" in the "Meets needs" column.

Role – State Crime Laboratory	Importance	Meets needs
Assist in crime investigation by including or excluding subjects as possible perpetrators.		
Assist in effective judicial proceedings by providing associative or exculpatory evidence.		
Advise on scientific investigation of crime		

Training and education		
Other (Please specify at least one other role that you consider to be important)		

Role – Department of Health/Forensic Science Laboratory	Importance	Meets needs
Assist in crime investigation by including or excluding subjects as possible perpetrators.		
Assist in effective judicial proceedings by providing associative or exculpatory evidence.		
Advise on scientific investigation of crime		
Training and education		
Other (Please specify at least one other role that you consider to be important)		

4.4 **Summary of survey responses**

	Assist Crime Investi gation	Assist in Judici al Proce edings	Advise Scienti fic Investi gation	Traini ng & Educ ation
Pol ice & Inv esti gat ors				
RI Stat e Poli ce Cri me Lab #1				
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4.5 List of Forum members

SCL

- Dennis Hilliard – Director
- Amy Duhaime - Criminalist
- Karen Vallaro – Criminalist

FSL

- Paula Gruttadauria – Breath supervisor
- David Ullis - Director
- Cara Lupino – Biology
- Sharon Mallard – Biology
- Robin Smith – Biology supervisor
- Jennifer Finch – Toxicology
- Gino Rebusini – Controlled substances, supervisor

4.6 List of stakeholders interviewed by Forum

DEPARTMENT	CONTACT
Barrington	Chief
Bristol	Chief
Burrillville	Col. Bernard Gannon
Central Falls	Lt. John DesMaris
Charlestown	Det. John Cummings
Coventry	Ron DaSilva
Cranston	Walter Craddock & Marc Zabinski
Cumberland	Chief
East Greenwich	Lt. Bill Higgins
East Providence	Chief
Foster	Chief Kettelle
Glocester	Chief Jaime Hainsworth
Hopkington	Lt. Mike Gilman
Jamestown	Lt. Balzer
Johnston	Dave Detora & Gary Maddoks
Lincoln	Chief Strain
Little Compton	Sid Wordell
Middletown	Chief William Burns

Narragansett	Det. Brian Ruffier
New Shoreham	Chief
Newport	Sgt. Gallipeau & Ken Wilkinson
North Kingston	Chief Fage
North Providence	Col. Devine
North Smithfield	Chief Reynolds
Pawtucket	Det. Marc Force
Portsmouth	Chief Seale
Providence	Woodruff & Britto & Hassett & Estin
Richmond	Sgt. Sean Butler
RISP	Mjr. John LaCrosse
Scituate	Chief Mack
Smithfield	William McGary
South Kingston	Sgt. Owens & Det. Mike Nolan
Tiverton	Lt. Tom Kaminski (Nick Maltase)
Warren	Chief Gordon
Warwick	Capt. Thomas Nye
West Greenwich	Chief Gary Malikowski
West Warwick	Capt. Adamo
Westerly	Chief Smith
Woonsocket	Dep. Chief William Shea & Luke Simard
State Fire Marshall	Jesse Owens
Prov. Fire Dept.	Paul Collardo
Warwick Fire Dept.	Art Lowe
ME	Laposata, Sikirica, Capron
Rape Crisis Center	Peg Langhammer
Police Academy	Dave Ricciarelli
DEM	Chief Scanlon
Navy	Chief Richard Roland
AG	Bill Guglietta
Public Defenders	Barbara Hersh
Attorneys	
Superior Court	Rogers & Revens
District Court/Traffic	DeRobbio & Ippolito
Family Court	Jeremiah
URI Campus Police	

4.7 List of Persons interviewed by NFSTC staff

Edmond S. Culhane, Jr., Colonel RI State Police
Gina Caroulo RI Justice Commission
Joe Smith RI Justice Commission
Rep. Carol Murman
Bill Guglietta Atty. General Office
John Hardman Public Defender
Dr. Gregory Hayes
Dr. Nolan Dept of Health
Dr. Laposata ME
Louis A. Luzzi, Dean URI

4.8 References

1. American Society of Crime Laboratory Directors. "Recommendations for Crime Laboratory Space Needs". Crime Laboratory Digest, Volume 19, No.2, April 1992.
2. Forensic Laboratories: Handbook for Facility Planning, Design, Construction, and Moving. U.S. Department of Justice publication NCJ 168106, 1998.
3. California Bureau of State Audits Forensic Laboratories, December 1998 97025. The report is available at www.bsa.ca.gov/bsa/pdfs/97025.pdf
4. *Frye v. United States*, 54 App. D. C. 46, 47, 293 F. 1013, 1014
5. *Daubert v. Merrell Dow Pharmaceuticals* (92-102), 509 U.S. 579 (1993).